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INTERNATIONAL PRELIMINARY EXAMINATION REPORT

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference SD203	FOR FURTHER ACTION	SeeNotificationofTransmittalofInternationalPreliminary Examination Report (Form PCT/IPEA/416)	
International application No. PCT/KR2003/001290	International filing date (day/month/year) 01 JULY 2003 (01.07.2003)	Priority date (day/month/year) 02 JULY 2002 (02.07.2002)	
International Patent Classification (IPC) or national classification and IPC IPC7 G02C 9/04			
Applicant PARK, SEUNG BAE			

1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.
2. This REPORT consists of a total of <u>5</u> sheets, including this cover sheet. <input checked="" type="checkbox"/> This report is also accompanied by ANNEXES, i.e., sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT). These annexes consist of a total of <u>20</u> sheets.
3. This report contains indications relating to the following items: I <input checked="" type="checkbox"/> Basis of the report II <input type="checkbox"/> Priority III <input type="checkbox"/> Non-establishment of opinion with regard to novelty, inventive step and industrial applicability IV <input type="checkbox"/> Lack of unity of invention V <input checked="" type="checkbox"/> Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement VI <input type="checkbox"/> Certain documents cited VII <input checked="" type="checkbox"/> Certain defects in the international application VIII <input checked="" type="checkbox"/> Certain observations on the international application

Date of submission of the demand 31 JANUARY 2004 (31.01.2004)	Date of completion of this report 28 OCTOBER 2004 (28.10.2004)
Name and mailing address of the IPEA/KR  Korean Intellectual Property Office 920 Dunsan-dong, Seo-gu, Daejeon 302-701, Republic of Korea Facsimile No. 82-42-472-7140	Authorized officer KIM, Sang Hee  Telephone No. 82-42-481-5974

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International application No.

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I. Basis of the report

1. With regard to the elements of the international application:*

 the international application as originally filed the description:pages _____, as originally filed
pages _____, filed with the demand
pages 1-8 _____, filed with the letter of 13/10/2004 the claims:pages _____, as originally filed
pages _____, as amended (together with any statement) under Article 19
pages _____, filed with the demand
pages 9-10 _____, filed with the letter of 13/10/2004 the drawings:pages _____, as originally filed
pages _____, filed with the demand
pages 1/10-10/10 _____, filed with the letter of 13/10/2004 the sequence listing part of the description:pages _____, as originally filed
pages _____, filed with the demand
pages _____, filed with the letter of _____

2. With regard to the language, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.

These elements were available or furnished to this Authority in the following language English which is

 the language of a translation furnished for the purposes of international search (under Rule 23.1(b)). the language of publication of the international application (under Rule 48.3(b)). the language of the translation furnished for the purposes of international preliminary examination (under Rules 55.2 and/or 55.3).

3. With regard to any nucleotide and/or amino acid sequence disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:

 contained in the international application in written form. filed together with the international application in computer readable form. furnished subsequently to this Authority in written form. furnished subsequently to this Authority in computer readable form The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished. The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.4. The amendments have resulted in the cancellation of: the description, pages 9-18 _____ the claims, Nos. 1-3 _____ the drawings, sheet _____5. This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).**

* Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this opinion as "originally filed." and are not annexed to this report since they do not contain amendments (Rules 70.16 and 70.17).

** Any replacement sheet containing such amendments must be referred to under item I and annexed to this report.

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V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Claims 4-8	YES
	Claims _____	NO
Inventive step (IS)	Claims 4-8	YES
	Claims _____	NO
Industrial applicability (IA)	Claims 4-8	YES
	Claims _____	NO

2. Citations and explanations (Rule 70.7)

Documents cited in the International Search Report:

D1: KR10-2002-0066148 A (Ko Myung Keun) 14 Aug. 2002

1. Regarding Novelty:

1.1 The subject matter of the claim 1 of the present application is a sunglasses holder attached to a cap, a woolen cap, a jogging hair-band, etc., which is comprised of a fixing member, a connection member, and hinges. The sunglasses holder is characterised in the hinges being rotatably coupled to each other and having a toothed wheel enabling angle adjustment.

The subject matter of D1, the closest prior art among the documents cited in the International Search Report, is a sunglasses holder for a cap comprised of a fixing piece, a coupling member, and a connection strip.

The fixing piece of D1 plays the same role as the fixing member of the claim 1 and the coupling member of D1 corresponds to the connection member of the claim 1. However, the coupling member of D1 differs from the connection member in that the connection member further contains hinges with the function of angle adjustment.

Due to the absence of the composition for angle adjustment, the subject matter of the claim 1 is considered to be new (Art. 33(2) PCT).

1.2 The subject matter of the claim 5 also includes the same technical feature of hinges of the claim 1.

Therefore the subject matter of the claim 5 is considered to be new (Art. 33(2) PCT).

As dependent claims of the claim 4 or 5, the subject matter of the claims 6-8 is also considered to be new (Art. 33(2) PCT).

2. Regarding Inventive Step:

As it is mentioned above, the difference between D1 and the claim 1 lies in the details of the hinges. Due to the absence of the hinges, D1 includes neither the function of bending, nor the function of angle adjustment. None of the cited documents in the international search report disclose combining the hinges which facilitates the function of rotation and the feature of toothed wheel with a sunglasses holder. Furthermore, the cap with the sunglasses holder of the claim 1 can maintain its intrinsic nature after detaching the connection member of the sunglasses holder due to the characteristics of the connection member being coupled to the pair of sunglasses rather than to the fixing member as in D1. This effect which seems to be an important function for a sunglasses holder has not been mentioned in any of the cited documents in the International Search Report. None of the cited documents provide any hint of the feature and effect of the claim 1 either.

Therefore the subject matter of the claim 1 seems to involve an inventive step (Art. 33(3) PCT). Since the claim 5 includes the same feature as the claim 1, the subject matter of the claim 5 also seems to involve an inventive step (Art. 33(3) PCT). The subject matter of the dependent claims, claims 6-8, seems to involve an inventive step as well (Art. 33(3) PCT).

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VII. Certain defects in the international application

The following defects in the form or contents of the international application have been noted:

1. Rule 5.1(a)(ii) PCT requires that the description indicate the background art which, as far as known to the applicant, can be regarded as useful for the understanding, searching, and examination for the invention, and preferably, cite the documents reflecting such art. It is considered that this rule has not been satisfied.
2. The claims do not contain reference signs as required by Rule 6.2(b) PCT.

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VIII. Certain observations on the international application

The following observations on the clarity of the claims, description, and drawings or on the question whether the claims are fully supported by the description, are made:

The reference sign of "501" on page 5, line 13 seems to be incorrect.

SUNGLASSES HOLDER

Technical Field

The present invention relates to a sunglasses holder. More particularly, the 5 invention relates to a sunglasses holder capable of combining a pair of sunglasses with a cap, a woolen cap, a jogging hair-band, a sports cap (suncap), a sun visor, a helmet, and the like.

Background Art

10 In general, a sunglasses is composed of a pair of lenses, a pair of rims and a pair of legs, and has been used for shielding sunlight. Recently, it also is used as a fashionable accessory, along with the above inherent purpose.

However, when the user wears the sunglasses described above, the around of his or her nose and ears become moist with perspiration due to a nose support, i.e., a 15 bridge of the rim and the legs. In addition, he or she may feel uncomfortably due to the weight of the sunglasses. In particular, when the user wears a cap together with a sunglasses, it makes the user more uncomfortable.

In order to overcome these problems in the prior art, a sunglasses affixed to a cap has been proposed, but it has a problem in that a user cannot select a cap, 20 depending on his or her preference.

Disclosure of Invention

The present invention has been made to solve the above problems occurring in the prior art, and it is an object of the invention to provide a sunglasses holder, which 25 is suitable for combining a pair of sunglasses with a cap, a woolen cap, a jogging

hair-band, a sports cap (suncap), a sun visor, a helmet, and the like, depending on a user's preference.

Another object of the invention is to provide a sunglasses holder being capable of detachably attaching a pair of sunglasses to a cap and the like.

5 A further object of the invention is to provide a sunglasses holder, in which the angle adjustment thereof is easily carried out.

In order to accomplish the above objects, according to one aspect of the present invention, there is provided a sunglasses holder, which is suitable for combining a pair of sunglasses with a cap, a woolen cap, a jogging hair-band, a sports cap (suncap),
10 a sun visor, a helmet, and the like. The sunglasses holder of the invention comprises: a fixing member having a fixing means for fixing to the cap or the like; a connection member being connected to the sunglasses; and hinges formed respectively in the fixing member and the connection member, the hinges being rotatably coupled to each other by a hinge pin and having a toothed wheel formed in the side wall such
15 that they are engaged with each other, thereby enabling an adjustment of angle.

According to another aspect of the invention, there is provided a sunglasses holder, which is suitable for combining a pair of sunglasses with a cap, a woolen cap, a jogging hair-band, a sports cap (suncap), a sun visor, a helmet, and the like, and can be carried in a disassembled state when not in use. The sunglasses holder of the
20 invention comprises: a fixing member including a body having an opening formed at the under face and a hole formed at both sides thereof, a resilient piece having a button projected through the hole, and a fixing means for fixing the body to the cap or the like; a detachably-attaching member inserted into the opening of the fixing member to be coupled with the fixing member, the detachably-attaching member
25 having a resilient hook formed such that it can be released from the fixing member by

pressurizing the resilient piece; a connection member coupled to the sunglasses; and hinges formed respectively in the fixing member and the connection member, the hinges being rotatably coupled to each other by a hinge pin and having a toothed wheel formed in the side wall such that they are engaged with each other, thereby
5 enabling an adjustment of angle.

Preferably, the fixing means of the fixing member may include a bolt, a support plate is integrally formed at both sides of the body, and the support plate has a hole for the bolt to pass through, thereby enabling a bolt coupling.

Preferably, the respective hinge or either of them has a female thread form at the
10 inner circumference thereof, and the hinge pin has a male thread formed at the outer circumference thereof, correspondingly to the female thread.

Brief Description of Drawings

Further objects and advantages of the invention can be more fully understood
15 from the following detailed description taken in conjunction with the accompanying drawings, in which:

FIG. 1(A) is a perspective view showing a sunglasses holder according to a first embodiment of the invention;

FIG. 1(B) is a perspective view of the sunglasses holder of FIG. (A), where a
20 fixing member and a detachably-attaching member are separated;

FIG. 2 is a perspective view of the sunglasses holder of FIG. (A), where a detachably-attaching member and a connection member are separated;

FIGS. 3(A) and 3(B) are a rear view and a side view showing the assembled state of the first embodiment of the invention;

25 FIGS. 4(A) and 4(B) are a rear view and a side view showing the disassembled

state of the first embodiment of the invention;

FIG. 4(C) is a rear view showing another embodiment having a hinge different from that of FIG. 4(A);

FIG. 5 shows caps having respectively a fixing member attached above the visor
5 thereof and a sunglasses holder of the invention assembled to the fixing member;

FIG. 6(A) shows a sunglasses assembled to the sunglasses holder of the invention;

FIG. 6(B) shows the sunglasses turned to the upper position;

FIGS. 7(A) and 7(B) illustrate a sunglasses holder according to a second
10 embodiment of the invention; and

FIGS. 8(A) to 8(C) show the sunglasses holder attached to a sun visor, a woolen cap, and a jogging hair-band.

Best Mode for Carrying Out the Invention

15 The construction and operation of the embodiments of the invention will be explained in detail with reference to the accompanying drawings.

FIG. 1(A) is a perspective view of a free detachable sunglasses holder according to a first embodiment of the invention.

Referring to FIG. 1(B) to 4(C), the first embodiment of the invention comprises
20 a fixing member 30, a detachably-attaching member 40, and a connection member 50.

The fixing member 30 includes a body 35 having an opening 31 provided at the lower portion thereof and a hole 32 provided at both sides thereof. The body 35 is provided, at the side portion thereof, with a support plate 34 integrally formed therewith, and the support plate 34 has a through-hole 34a formed therein, through
25 which a bolt is to pass. The sunglasses holder of the invention is fixed to the bottom

portion or front face a cap visor, or to a sports cap by means of a bolt passing through the through-hole 34a. A resilient piece 33 is housed inside the fixing member 30, and the resilient piece 33 has a pressurizer 33a projected through the hole 32.

The detachably-attaching member 40 includes a base 41, a resilient hook 42, and 5 a hinge 43 formed integrally together. The resilient hook 42 is constructed such that it is inserted into the opening 31 of the fixing member, and its both ends are fixed by one side wall of the hole 32. It is also configured such that the resilient hook 42 constrained by the hole 32 can be released from the fixing member 30 by pressurizing the resilient piece 33.

10 The connection member 50 has a connection pin 52 formed at one end thereof, by which a pair of sunglasses can be assembled thereto.

The hinges 43, 51 are constructed in such a manner that the lower portion of the base 41 and the upper portion of the connection member 501 are rotatably coupled to each other by a hinge pin 60. In particular, as shown in FIG. 2, the both hinges 43, 51 15 have toothed wheels 43a, 51a engaged with each other at their side walls, so that the detachably-attaching member 40 and the connection member 50 can be pivotally rotated with respect to each other and can be remained strictly at a desired adjusted angle.

Referring to FIGS. 4(A) and 4(C), it will be seen that the hinges 43, 51 and the 20 hinge pin 61, 62 have a different construction from each other. That is, as shown in FIG. 4(A), a typical hinge pin 61 can be employed for connection, but the hinges 43, 51 and the hinge pin 61 are structured to be thread-engaged with each other. More specifically, the hinge 51 formed above the connection member 50 has a female thread formed in the inner circumference thereof, and correspondingly the hinge pin 62 has a male thread formed in the outer circumference thereof. Therefore, the hinges 25 62 has a male thread formed in the outer circumference thereof. Therefore, the hinges

43, 51 are fitted together and the hinge pin 62 is thread-inserted thereinto to thereby connect them. This construction prevents the hinge pin 62 from being escaped from the sunglasses holder, which may happen in a long-term use of it. Also, it enables sunglasses angle to be adjusted and the adjusted angle to be remained correctly as
5 adjusted.

FIG. 5 shows caps having respectively the fixing member 30 attached above the visor 21a thereof (the front face of the cap) and a pair of sunglasses 10 assembled above the visor 21a. Among young people and sports men, recently, the sunglasses has been used as a fashionable accessory, along with the purpose of shielding the
10 sunlight. The example in FIG. 5 is to conform to this recent tendency. Furthermore, if the fixing member 30 of the invention is fixed both above and below the cap visor 21a, the sunglasses 10 can be selectively attached to either of them, depending on the circumstances

Referring to FIGS. 6(A) and 6(B), the sunglasses 10 can be used for shielding
15 sunlight as shown in FIG. 6(A), and when desired, can be turned upwards as shown in FIG. 6(B). Therefore, when the sunglasses 10 is not needed temporarily, it can be turned upwards by simply operating to pressurize the resilient piece 33, without removing the detachably-attaching member 40. According to the invention, it is understood that both hinges 43, 51 have the toothed wheels 43a, 51a formed in the
20 side wall thereof and engaged with each other, and therefore, once the sunglasses 10 is turned upwards, it will not fall down voluntarily unless the user pushes it down.

FIGS. 7(A) and 7(B) illustrate a second embodiment of the invention. The second embodiment is different from the first one in that there is no detachably-attaching member 40. That is, the second embodiment is composed of a fixing
25 member 30 and a connection member 50. The fixing member has a support plate 34

formed at both sides thereof, and the support plate 34 is provided with a through-hole 34a, through which a bolt is to pass. The connection member 50 is rotatably coupled to the fixing member at one side and, at the other side, can be connected to the sunglasses 10. It also is preferable in the second embodiment that the both 5 hinges have toothed wheels 43a, 51a engaged with each other at the side wall thereof. According to the second embodiment, therefore, a sunglasses holder having no detachable function is provided. In addition, as shown in FIGS. 7(A) and 7(B), the fixing member 30 and the connection member 50 may be switched to each other, in which the construction of FIG. 7(A) is suitable for the upper face of a cap visor 21a or 10 a hair band 24 and that of FIG. 7(B) is suitable for the lower portion of the cap visor 21a.

FIGS. 8(A) to 8(C) show the sunglasses holder attached under the visor of a sun visor 22, a woolen cap 23, and a jogging hair-band 24 when in use. In particular, the fixing member 30 shown in FIGS. 8(B) and 8(C) has no support plate. The support 15 plate has a through-hole formed at the side thereof for a bolt to pass through. Therefore, in the case where the fixing member 30 is exposed to the outside, the outer appearance is not spoiled, such as when the sunglasses holder is used for the upper portion of a cap visor 21a, a woolen cap 23 and a jogging hair-band 24.

20 Industrial Applicability

According to the sunglasses of the invention, various caps and sunglasses lenses can be selected and combined therewith, depending on user's preference, and the user can carry it in a disassembled state.

In addition, the user can have a pleasant feeling when worn since it does not 25 need a rim and legs.

Also, the angle of sunglasses can be freely adjusted due to its hinges, and the adjusted angle can be accurately maintained by means of the engagement of the toothed wheels formed in the side walls thereof.

Furthermore, an additional fixing member can be fixed above a cap visor, and
5 thus, when needed, the sunglasses holder can be applied to the upper and lower portion of the cap visor, thereby providing various uses.

While the present invention has been described with reference to the particular illustrative embodiments, it is not to be restricted by the embodiments but only by the appended claims. It is to be appreciated that those skilled in the art can change or
10 modify the embodiments without departing from the scope and spirit of the present invention.

What Is Claimed Is:

1. (Cancelled)
- 5 2. (Cancelled)
3. (Cancelled)
4. A sunglasses holder, which is suitable for combining a pair of sunglasses with
10 a cap, a woolen cap, a jogging hair-band, a sports cap (suncap), a sun visor, a helmet, and the like, comprising:
 - a) a fixing member having a fixing means for fixing to the cap or the like;
 - b) a connection member coupled to the sunglasses; and
 - c) hinges formed respectively in the fixing member and the connection member,
15 the hinges being rotatably coupled to each other by a hinge pin and having a toothed wheel formed in the side wall such that they are engaged with each other, thereby enabling an adjustment of angle.
5. A sunglasses holder, which is suitable for combining a pair of sunglasses with
20 a cap, a woolen cap, a jogging hair-band, a sports cap (suncap), a sun visor, a helmet, and the like, and can be carried in a disassembled state when not in use, comprising:
 - a) a fixing member including a body having an opening formed at the under face and a hole formed at both sides thereof, a resilient piece having a button projected through the hole, and a fixing means for fixing the body to the cap or the like;
 - 25 b) a detachably-attaching member inserted into the opening of the fixing

member to be coupled with the fixing member, the detachably-attaching member having a resilient hook formed such that it can be released from the fixing member by pressurizing the resilient piece;

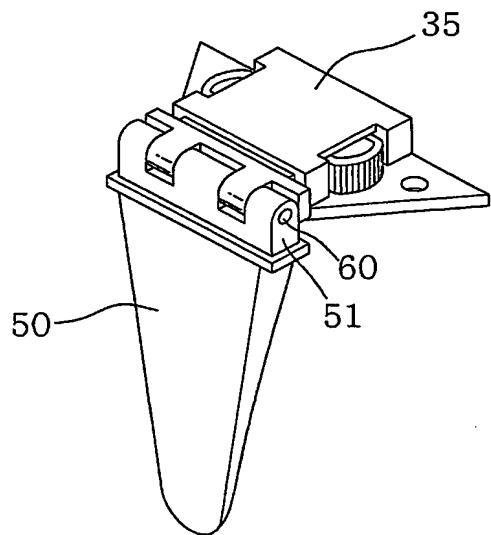
- c) a connection member coupled to the sunglasses; and
- 5 d) hinge formed respectively in the detachably-attaching member and the connection member, the hinges being rotatably coupled to each other by a hinge pin and having a toothed wheel formed in the side wall such that they are engaged with each other, thereby enabling an adjustment of angle.

- 10 6. A sunglasses holder according to claim 4 or 5, wherein the fixing means of the fixing member includes a bolt, a support plate is integrally formed at both sides of the body, and the support plate has a hole for the bolt to pass through, thereby enabling a bolt coupling.

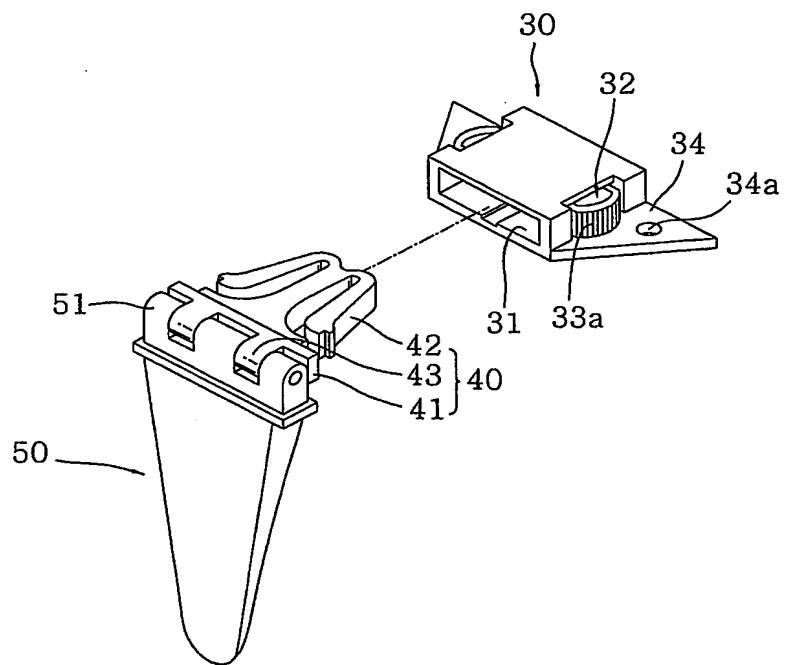
- 15 7. A sunglasses holder according to claim 4 or 5, wherein the respective hinge or either of them has a female thread form at the inner circumference thereof, and the hinge pin has a male thread formed at the outer circumference thereof, correspondingly to the female thread.

- 20 8. A sunglasses holder according to claim 4 or 5, wherein the fixing member is coupled to upper portion of a cap visor.

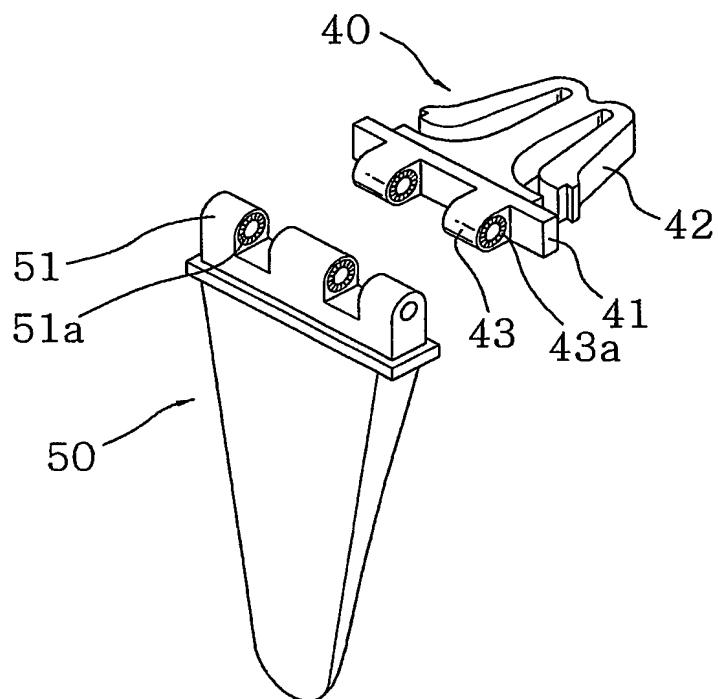
【FIG. 1(A)】



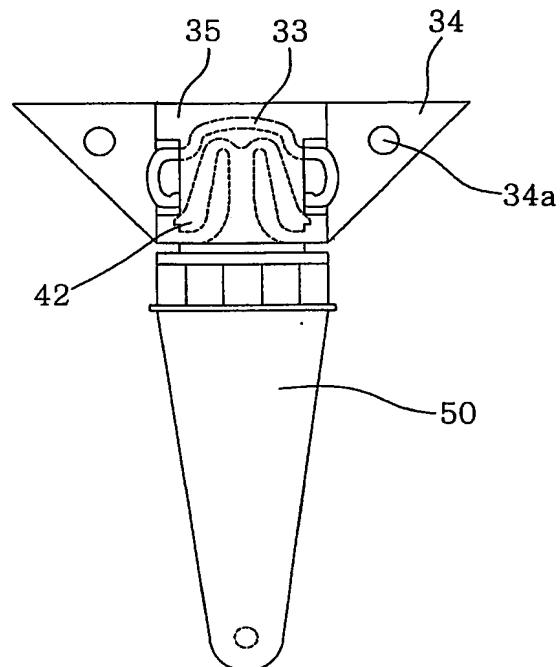
【FIG. 1(B)】



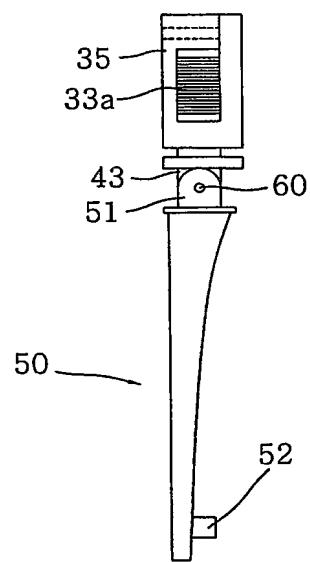
【FIG. 2】



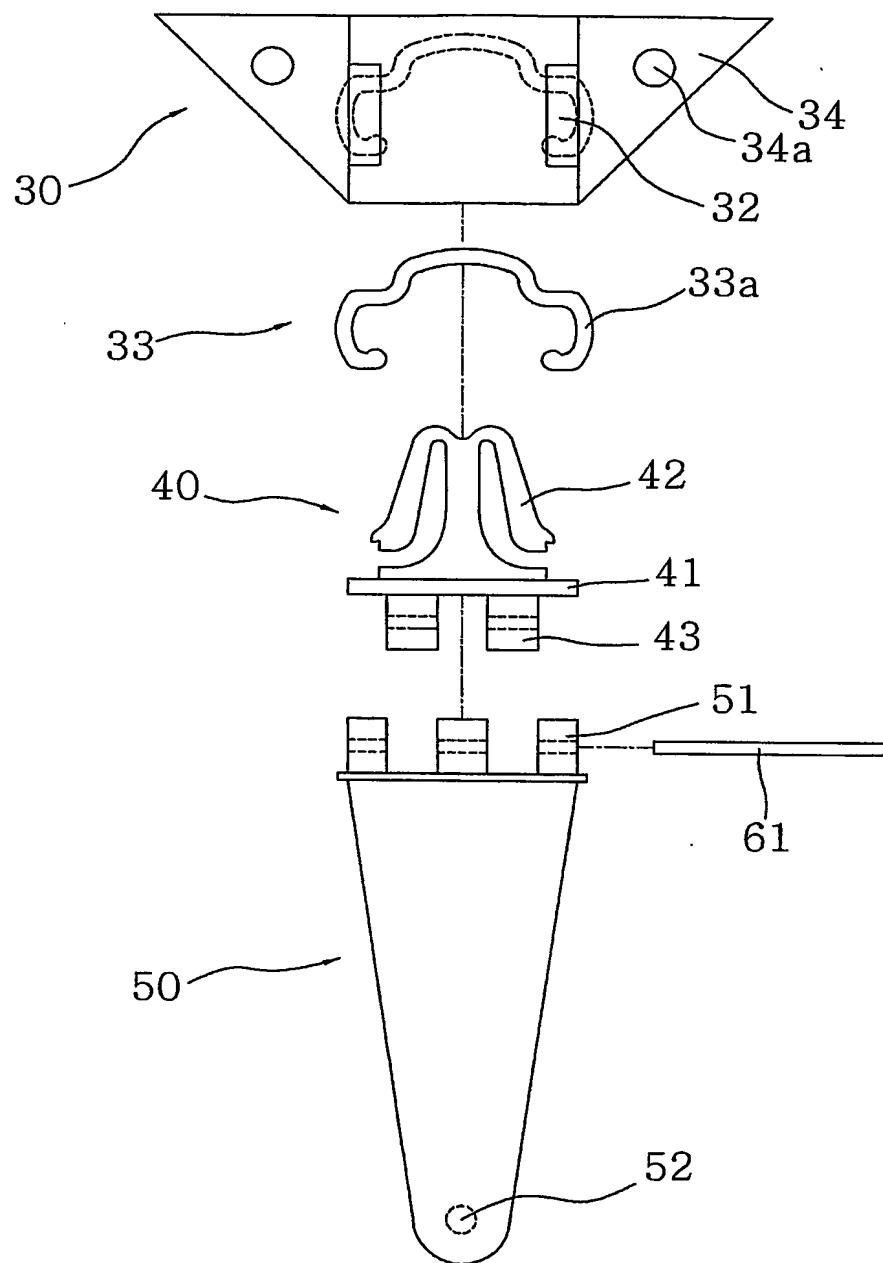
【FIG. 3(A)】



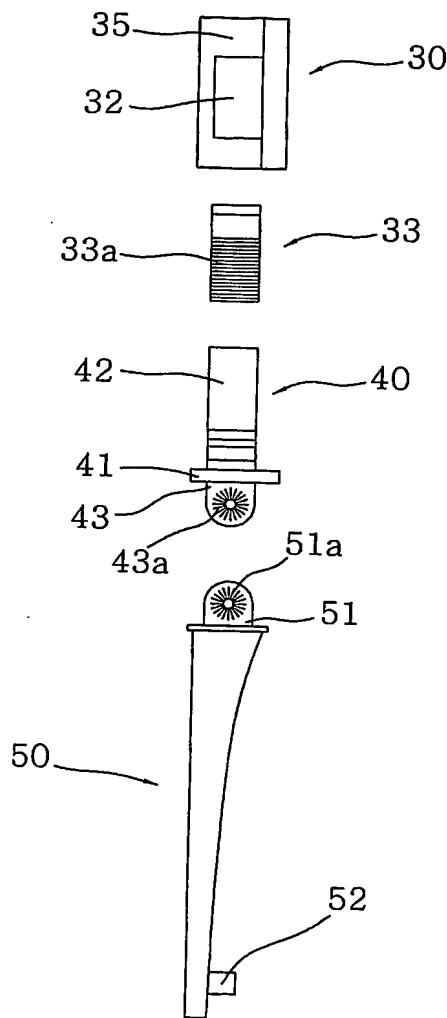
【FIG. 3(B)】



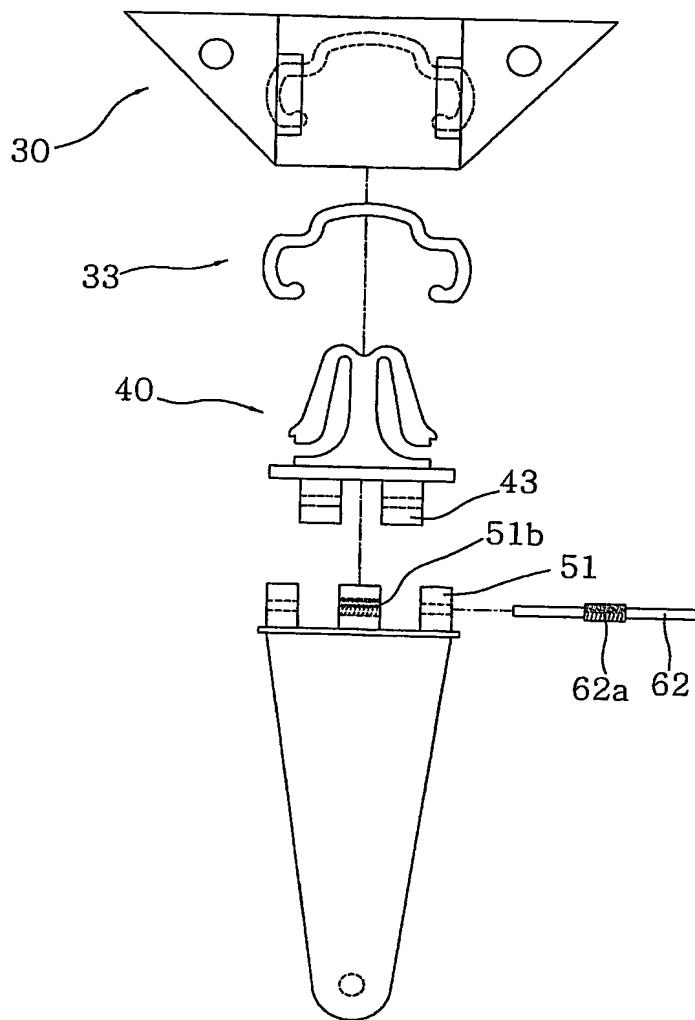
【FIG. 4(A)】



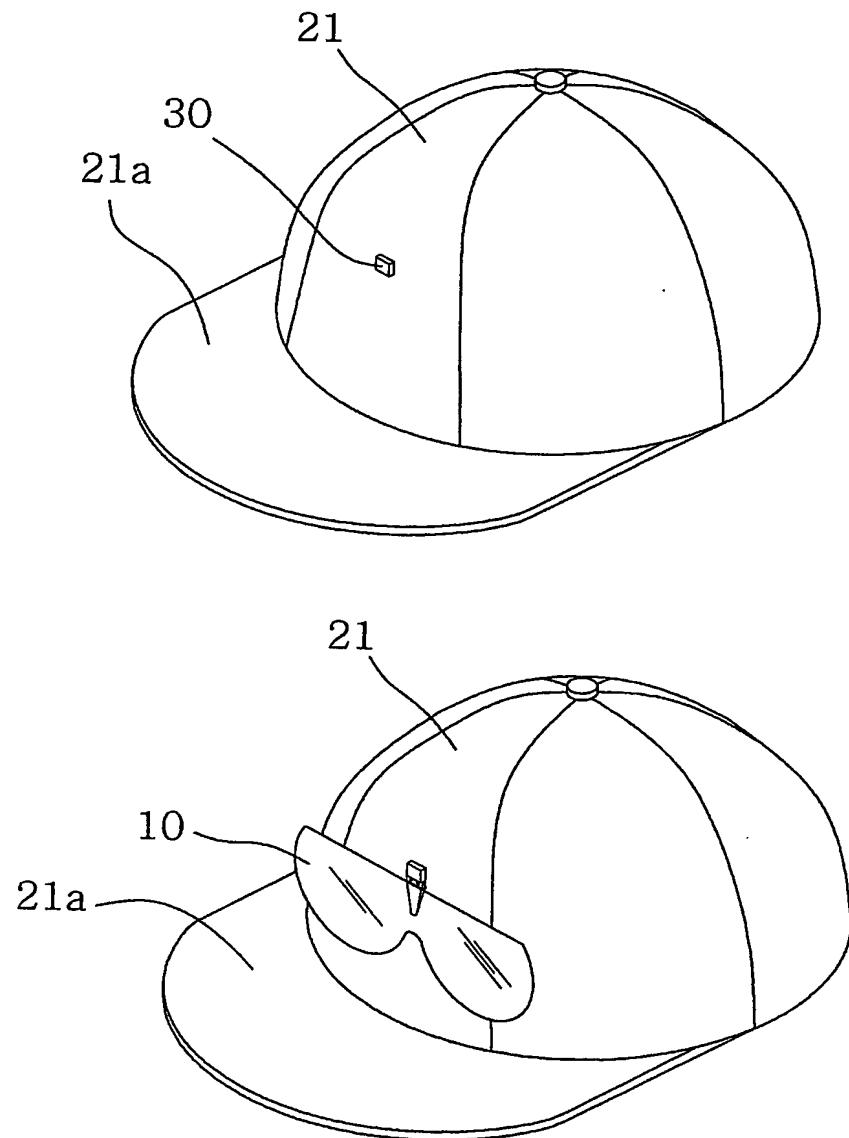
【FIG. 4(B)】



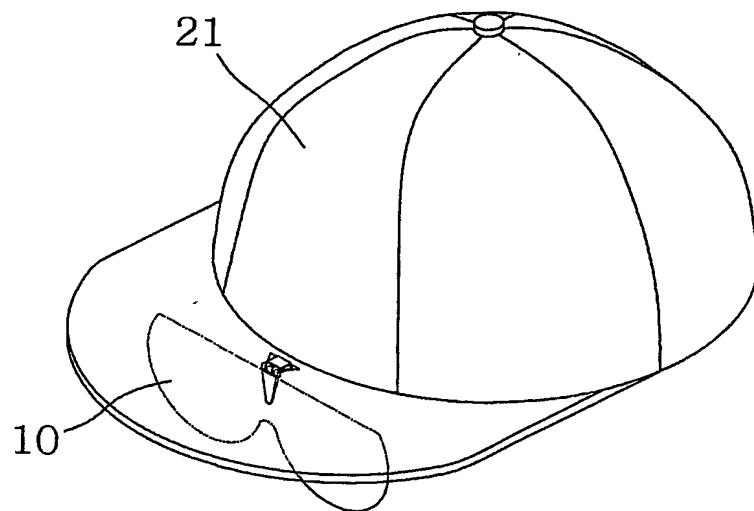
【FIG. 4(C)】



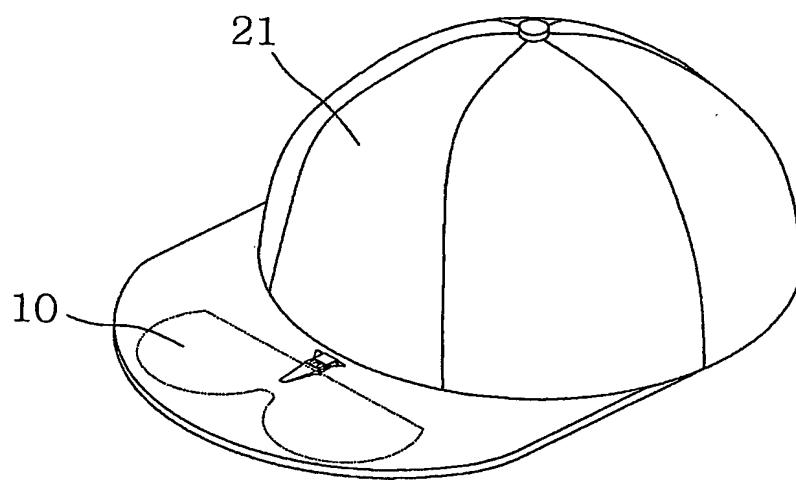
【FIG. 5】



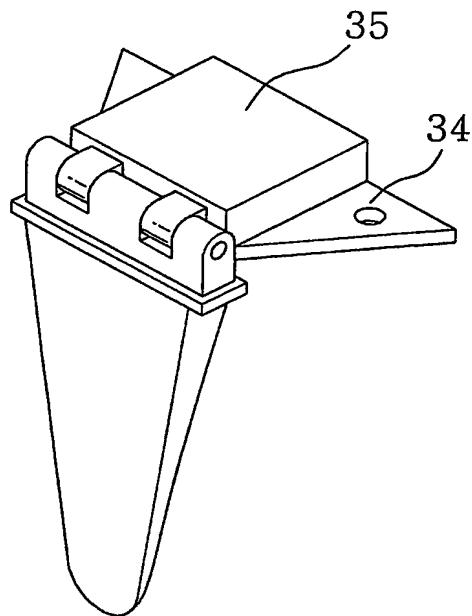
【FIG. 6(A)】



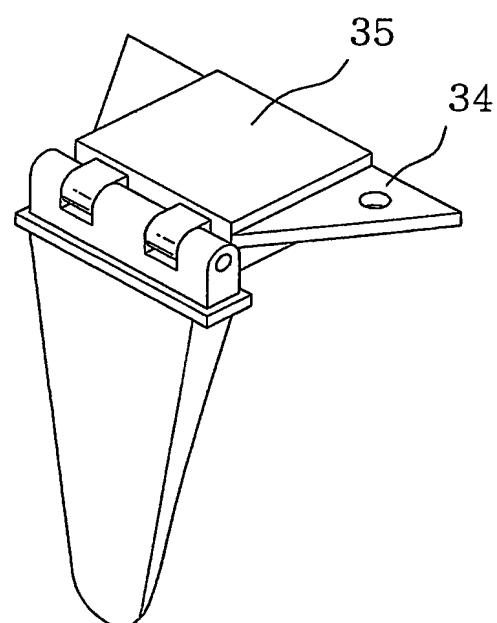
【FIG. 6(B)】



【FIG. 7(A)】



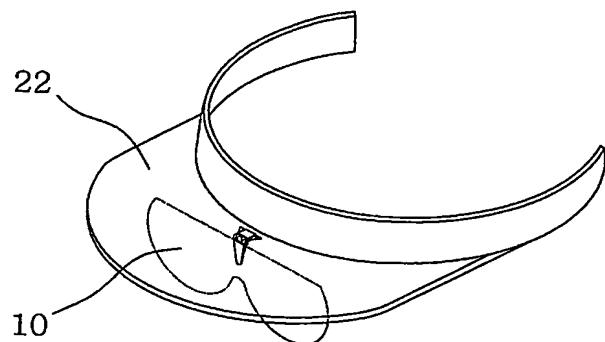
【FIG. 7(B)】



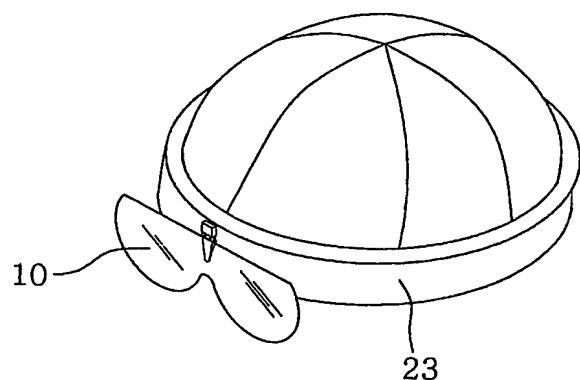
AMENDED SHEET (ART. 34)

10/10

【FIG. 8(A)】



【FIG. 8(B)】



【FIG. 8(C)】

